

CLAIMS

1. A nucleoside or nucleotide having a 5-substituted-2-oxo(1H)-pyridin-3-yl group as a base.
- 5 2. The nucleoside or nucleotide according to claim 1, wherein the 5-position of the base is substituted with a substituent selected from the group consisting of the following:
 - 1) a photoreactive group selected from iodine and
10 bromine;
 - 2) an alkenyl group, an alkynyl group or an amino group, or a derivative thereof;
 - 3) biotin or a derivative thereof; and
 - 4) a fluorescent molecule selected from fluorescein,
15 6-carboxyfluorescein, tetramethyl-6-carboxyrhodamine, and derivatives thereof.
3. The nucleoside or nucleotide according to claim 1 or 2, wherein the 5-position of the base is substituted with
 - 1) a photoreactive group selected from iodine and bromine,
20 2) an alkenyl group, an alkynyl group or an amino group, or a derivative thereof, or 3) biotin or a derivative thereof.
4. The nucleoside or nucleotide according to any one of claims 1 to 3, wherein the 5-position of the base is substituted with an iodine or biotin derivative.
- 25 5. A nucleic acid incorporating the nucleotide according to any one of claims 1 to 4.
6. The nucleic acid according to claim 5, wherein the nucleotide according to any one of claims 1 to 4 forms a

base pair with a nucleotide having a 6-substituted 2-amino-purin-9-yl group as a base.

7. The nucleic acid according to claim 6, wherein the 6-substituted 2-amino-purin-9-yl group is a 2-amino-6-(2-thienyl)purin-9-yl group or a 2-amino-6-(dimethylamino)-purin-9-yl group.

8. The nucleic acid according to claim 5, which is used as antisense DNA or RNA, a ribozyme or an aptamer.

9. The nucleic acid according to claim 5, which encodes all or part of a protein or peptide.

10. A method for preparing a nucleic acid incorporating the nucleotide according to any one of claims 1 to 4, which comprises:

effecting transcription, replication or reverse transcription by using, as a template, a nucleic acid containing a nucleotide having a 6-substituted 2-amino-purin-9-yl group as a base, so that the nucleotide according to any one of claims 1 to 4 is incorporated at a site complementary to the nucleotide having a 6-substituted 2-amino-purin-9-yl group as a base.